OpenChain KWG 4차 모임

FOSSology 소개

2019. 12. 2
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FOSSology 개요
Why FOSSology?

An Example – What do we find?

The Example

- (Apache projects are known for homogenous licensing)
- Such a project declares its licensing on its Website
- However, Open Source implies using other open source
- As such, a projects can contain also parts from other open source projects
Why FOSSology?

The Problem Actually

You know these examples

Distributing open source software requires to
- Provide licenses of involved software
- Provide copyright statements of involved authors
- Provide disclaimers
- ... and much more
Why FOSSology?

It is about finding licenses

Finding Licenses

- License texts
- References to licenses
- Written texts explaining licensing
- License relevant statements
www.fossology.org

- 2008 initial publication by HP
- 2015 Linux Foundation Collaboration Project
- It is a Linux Application
- Different tasks for OSS license compliance
  - Scanning for licenses
  - Copyright, authorship, e-mails
  - ECC statements
  - Generation of documentation
  - Export and import SPDX files
FOSSology 동작 개요

/* Copyright (c) 2009-2009 Simon Kelley

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it under the terms of the GNU General Public License as published by
the Free Software Foundation; version 2 dated June, 1991, or
(at your option) version 3 dated 29 June, 2007.

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MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program.  If not, see <http://www.gnu.org/licenses/>.
*/

#include "dnamaq.h"
FOSSology 동작 개요

- 하지만, Source File내 License 문구가 지워졌다면?

- FOSSology는 License 문구가 지워진 Source File에서는 License 검출을 할 수 없음.

- FOSSology는 License 문구가 지워진 Source File에서는 License 검출을 할 수 없음.
FOSSology 관련 사이트

1. FOSSology 홈페이지 (https://www.fossology.org/)
FOSSology 관련 사이트

2. FOSSology wiki 아카이브 (http://archive15.fossology.org/projects/fossology/wiki)
FOSSology 관련 사이트

FOSSology 관련 사이트

설치 방법
Source로 설치하기

1. Source Code 확보
2. Dependency 설치 스크립트 실행
3. Make / make install
4. PHP, Apache, Postgresql 설정값 변경
5. Postinstall 스크립트 실행
Docker 이미지 이용하기

1. Docker Desktop 설치

![Docker Desktop 설치 스크린샷](https://docs.docker.com/docker-for-windows/install/#download-docker-for-windows)

**Install Docker Desktop on Windows**

Docker Desktop for Windows is the Community version of Docker for Microsoft Windows. You can download Docker Desktop for Windows from Docker Hub.

Download from Docker Hub

**What to know before you install**

**System Requirements**

- Windows 10 64-bit Pro, Enterprise, or Education (Build 15063 or later).
- Hyper-V and Containers Windows features must be enabled.
- The following hardware prerequisites are required to successfully run Client hyper-V on Windows 10:
  - 64 bit processor with Second Level Address Translation (SLAT)
  - 4GB system RAM
  - BIOS-level hardware virtualization support must be enabled in the BIOS settings. For more information, see Virtualization.

**Note:** Docker supports Docker Desktop on Windows based on Microsoft's support lifecycle for Windows 10 operating system. For more information, see the Windows lifecycle fact sheet.

**README for Docker Toolbox and Docker Machine users:** Microsoft Hyper-V is required to run Docker Desktop. The Docker Desktop Windows installer enables Hyper-V if required, and reverts your machine. When Hyper-V is enabled, VirtualBox no longer works. However, any existing VirtualBox VM images are retained.

VirtualBox VMs created with `docker-machine` (including the `default` one typically created during Toolbox install) no longer start. These VMs cannot be used side-by-side with Docker Desktop. However, you can still use `docker-machine` to manage remote VMs.

**What's Included in the Installer**

The Docker Desktop installation includes Docker Engine, Docker CLI client, Docker Compose, Docker Machine, and Kitematic.

Containers and images created with Docker Desktop are shared between all user accounts on machines where it is installed. This is because all Windows accounts use the same VM to build and run containers.
2. Command 실행

Docker 이미지 이용하기

Docker

FOSSology comes with a Dockerfile allowing the containerized execution both as single instance or in combination with an external PostgreSQL database. Note: It is strongly recommended to use an external database for production use, since the the standalone image does not take care of data persistency.

A pre-built Docker image is available from Docker Hub and can be run using following command:

```
docker run -p 8081:80 fossology/fossology
```

The docker image can then be used using http://IP_OF_DOCKER_HOST:8081/repo user fossy passwd fossy.
사용 방법
Getting Started with FOSSology

FOSSology is a framework for software analysis tools. With it, you can:

- Upload files into the fossology repository.
- Unpack files (zip, tar, bz2, iso's, and many others) into its component files.
- Browse upload file trees.
- View file contents and meta data.
- Scan for software licenses.
- Scan for copyrights and other author information.
- View side-by-side license and bucket differences between file trees.
- Tag and attach notes to files.
- Report files based on your own custom classification scheme.

Where to Begin...

- The menu at the top contains all the primary capabilities of FOSSology.
- Login: Depending on your account's access rights, you may be able to upload files, schedule analysis tasks, or even add new users.

This login uses HTTP, so passwords are transmitted in plain text. This is not a secure connection.

Username: fossy
Password: *****
Login
### Uploads in Software Repository

<table>
<thead>
<tr>
<th>Upload Name and Description</th>
<th>Status</th>
<th>Comment</th>
<th>Main licenses</th>
<th>Assigned to</th>
<th>Upload Date</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.17.0.tar.gz -- select action --</td>
<td>open</td>
<td></td>
<td></td>
<td>Unassigned</td>
<td>2019-11-29 05:55:12</td>
<td></td>
</tr>
<tr>
<td>13.1.3.tar.gz -- select action --</td>
<td>open</td>
<td></td>
<td></td>
<td>Unassigned</td>
<td>2019-11-28 11:05:11</td>
<td></td>
</tr>
</tbody>
</table>

Showing 1 to 2 of 2 entries

Select [Whole folder | Marked uploads] to run: [ReadME_OSS generation] [SPDX2 generation]
Upload

- Upload From File
- Upload From URL
- Upload From Version Control System
- Upload From Server
<table>
<thead>
<tr>
<th>Display</th>
<th>Licence Name</th>
<th>Concluded License Count</th>
<th>Scanning Results:</th>
<th>Edited Results</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Clearing Status</td>
<td>Files Cleared</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No_license_found [N]</td>
<td>0/0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GPL [N]</td>
<td>0/1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No_license_found [N]</td>
<td>0/0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No_license_found [N]</td>
<td>0/0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No_license_found [N]</td>
<td>0/0</td>
</tr>
<tr>
<td></td>
<td>Testing</td>
<td></td>
<td></td>
<td>[View][Info][Download] [Tag][Edit][Bulk]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Windows</td>
<td></td>
<td></td>
<td>[View][Info][Download] [Tag][Edit][Bulk]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Java</td>
<td></td>
<td></td>
<td>[View][Info][Download] [Tag][Edit][Bulk]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JS_EXT</td>
<td></td>
<td></td>
<td>[View][Info][Download] [Tag][Edit][Bulk]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>py_ext</td>
<td></td>
<td></td>
<td>[View][Info][Download] [Tag][Edit][Bulk]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>register</td>
<td></td>
<td></td>
<td>[View][Info][Download] [Tag][Edit][Bulk]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>src</td>
<td></td>
<td></td>
<td>[View][Info][Download] [Tag][Edit][Bulk]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>test</td>
<td></td>
<td></td>
<td>[View][Info][Download] [Tag][Edit][Bulk]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>tshbh_tool</td>
<td></td>
<td></td>
<td>[View][Info][Download] [Tag][Edit][Bulk]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>utils</td>
<td></td>
<td></td>
<td>[View][Info][Download] [Tag][Edit][Bulk]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>_options</td>
<td></td>
<td></td>
<td>[View][Info][Download] [Tag][Edit][Bulk]</td>
<td></td>
</tr>
</tbody>
</table>

Hint: Click on the license name to search for where the license is found in the file listing.
개별 File 확인

```
//
// TLW is provided for use under the LICENSE, Apache 1.0 BSD.
// Users may not use either LICENSE depending on the LICENSE:
// restrictions of the systems with which they plan to integrate
// the TLW code.
//
// Apache License
// Version 2.0, January 2004
// http://www.apache.org/licenses/LICENSE-2.0
//
// Unless required by applicable law or agreed to in writing, software
// distributed under the License is distributed on an "AS IS" BASIS,
// WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
// See the License for the specific language governing permissions and
// limitations under the License.
```
Clearing
Clearing (bulk)
### Clearing

#### License Browser

**Folder:** Software Repository

**3.17.0.tar.gz/3.17.0.tar.gz/sh3-3.17.0/java/src/main/java/com/trendmicro/tish**

**Display:** 50 files (tree view or flat)

<table>
<thead>
<tr>
<th>Display</th>
<th>Concluded</th>
<th>License Count</th>
<th>Clear</th>
<th>License Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>1</td>
<td>0</td>
<td>Clear</td>
<td>Apache-2.0</td>
</tr>
</tbody>
</table>

**Scanner Count:**

- 26 licenses
  - Concluded: 1 license
  - License: Apache-2.0
  - Clear: Clear

**Summary**

- Unique licenses: 2
- Unique scanned detected licenses: 1
- Concluded licenses: 1
- Licenses found: 5
- Files with no detected licenses: 0
- Concluded files with no detected licenses: 0

**Scanner details**

- Latest run of all available agents: Show
  - The latest results of agent nomos are from revision '3.7.0-rc1-13-g819a49ab62' at 3/9/49.
  - The latest results of agent monk are from revision '3.7.0-rc1-13-g819a49ab62' at 3/9/49.
  - The agent reportImport has not been run on this upload.
  - Schedule reportImport scan
  - The latest results of agent ojo are from revision '3.7.0-rc1-13-g819a49ab62' at 3/9/49.
  - Show bulk history

#### Files Table

<table>
<thead>
<tr>
<th>Files</th>
<th>Scanner Results (N: nomos, M: monk, NK: ninka, I: reportImport, O: ojo)</th>
<th>Edited Results</th>
<th>Clearing status</th>
<th>Files changed</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>BucketOption.java</td>
<td>Apache-2.0 [N], BSD-3-Clause [N]: [M]: 98%</td>
<td>Apache-2.0</td>
<td>[●]</td>
<td>1/1</td>
<td>[View]</td>
</tr>
<tr>
<td>ChecksumOption.java</td>
<td>Apache-2.0 [N], BSD-3-Clause [N]: [M]: 98%</td>
<td>Apache-2.0</td>
<td>[●]</td>
<td>1/1</td>
<td>[View]</td>
</tr>
<tr>
<td>Tish.java</td>
<td>Apache-2.0 [N], BSD-3-Clause [N]: [M]: 98%</td>
<td>Apache-2.0</td>
<td>[●]</td>
<td>1/1</td>
<td>[View]</td>
</tr>
<tr>
<td>TishCreator.java</td>
<td>Apache-2.0 [N], BSD-3-Clause [N]: [M]: 98%</td>
<td>Apache-2.0</td>
<td>[●]</td>
<td>1/1</td>
<td>[View]</td>
</tr>
<tr>
<td>TishUtil.java</td>
<td>Apache-2.0 [N], BSD-3-Clause [N]: [M]: 98%</td>
<td>Apache-2.0</td>
<td>[●]</td>
<td>1/1</td>
<td>[View]</td>
</tr>
</tbody>
</table>
이외에...

- SPDX 문서 출력 (RDF / tag:value)
- ReadMe OSS 문서 (text) 출력
- Copyright, Email, URL 검출 및 출력
- Keyword 검출 등등
Conclusion
Conclusion

- 시스템 운영에 노력 필요
- 사용 방법에 따라 효과적인 Tool
- 다른 시스템에 연동 가능
- 새로운 Agent 등장으로 발전이 기대됨
- Documentation...
Q & A
감사합니다